

Outstanding Projects of 2003

Jim Ford Creek Water Quality Management Report

Jim Ford Creek in the Clearwater Basin (see Figure 1) flows through forested uplands to the city of Weippe then passes through a narrow steep basalt canyon to its confluence with the Clearwater River.

The Jim Ford Creek watershed is managed to reduce pollutants (including sediment, excess temperature, and bacteria) and nutrients (including total inorganic nitrogen and total phosphorus). Nonpoint sources causing impaired water quality include timber harvest activities, rural land use, grazing, non-irrigated croplands, urban runoff, and land development activities. Point sources of pollution include the Weippe wastewater treatment plant, the Timberline High School wastewater treatment plant, and Hutchins Lumber, Inc.

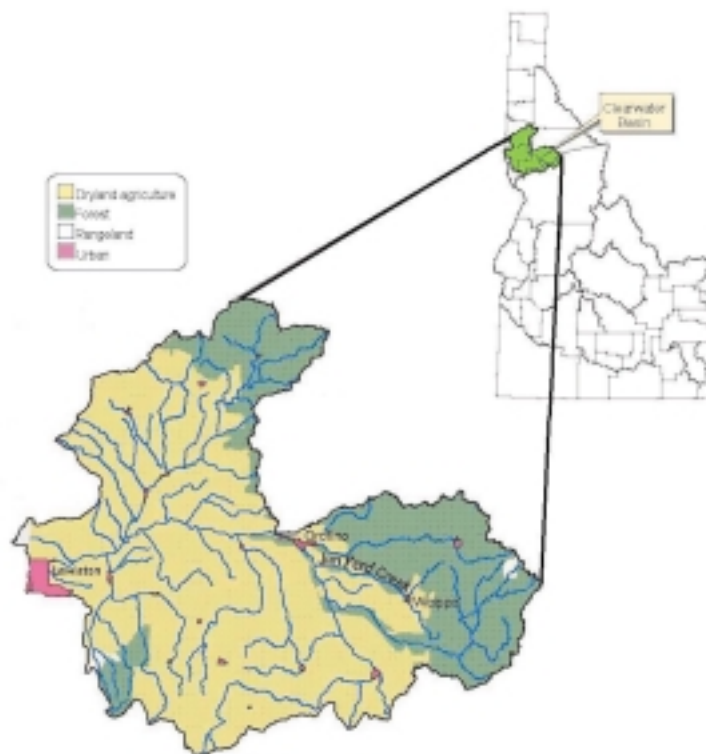


FIGURE 1
Jim Ford Creek in the Clearwater Basin

KEYS FOR SUCCESS

Three keys for success in the watershed management of nonpoint sources fueled the tremendous cooperative efforts of the Clearwater Soil and Water Conservation District, the Nez Perce Tribe, the Idaho Department of Lands, Potlatch Corporation, and private landowners. First, every agency made an effort toward public outreach, increasing the camaraderie between the agencies and the private landowners. Second, landowners have been and continue to be very proactive in seeking assistance and technical advice from the conservation district. Finally, Clearwater County recognized the assets of all of the watershed improvements and increased funding to the conservation district.

PHASED IMPLEMENTATION PLAN

Due to the complexity of riparian systems, restoration efforts take many years to become fully effective. The Clearwater Basin Advisory Group formed the Jim Ford Creek Watershed Advisory Group to develop an implementation plan to reduce the pollutants affecting water quality and the result is a phased plan with a schedule of activities to reduce pollutant loading to the stream. Refer inside for Table 1 provides a summary of the watershed management projects that have already been accomplished, along with descriptions of the resultant benefits to Jim Ford Creek water quality. Many of the watershed improvement projects are being installed on streams that are tributaries to the mainstem of Jim Ford Creek.



FIGURE 2
One of nine rural land use projects

TABLE 1 Summary of Watershed Management Projects for Jim Ford Creek

Management Issues	Collaborative Partners in Watershed Management	Watershed Management Projects Accomplished	Resultant Benefits to Jim Ford Creek Water Quality
Forestry Land Use	Idaho Department of Lands Clearwater Soil and Water Conservation District (Clearwater SWCD)	2 miles of fence built, 5 culverts installed, stream rehabilitation, and riparian plantings completed in Miles Creek	Fencing and culvert installation restores natural drainage pattern and eliminates historic spring flooding that had transported nutrients, bacteria, and sediment to the stream Stabilized streambanks and restored riparian vegetation, which filters pollutants, reduces erosion, and cools the water
		1.5 miles of riparian plantings on Wilson Creek	Restored riparian vegetation, which filters pollutants, reduces erosion, and lowers water temperature
		Riparian plantings of trees and shrubs on Space Creek	Restored riparian vegetation, which filters pollutants, reduces erosion, and lowers water temperature
	Potlatch Corporation Clearwater SWCD	Constructed 6 miles of fence, two new corrals, two cattle guards, and two new stockwater ponds outside of the riparian area, and planted trees and shrubs in the disturbed stream sites on Winter Creek	Eliminated grazing on 80% of the Winter Creek subwatershed, thereby reducing nutrient, bacteria, and sediment load to the receiving waters Riparian habitat restoration produced cooler instream temperatures
		Stabilized and repaired mass failure 100 feet wide by 800 feet long on Green Road, installing culvert ahead of the slump to keep excess water from saturating the fill	Eliminated further sedimentation and channel movement of a lower reach of Jim Ford Creek that had been previously impacted by the bank failure
Rural Land Use	Clearwater Highway District Clearwater SWCD	Nine projects in the Jim Ford Creek drainage to line ditches with rock; grade, slope, and rock roads; mat and hydroseed bare slopes; replace ineffective culverts; and build additional culverts (Figure 2)	Ditch armoring has reduced high flows that used to cause gully washing, bank erosion, and increased turbidity, allowing more spring runoff water to infiltrate instead of contributing to overland flow. Properly functioning culverts and vegetated banks reduce sediment contribution to streams
	Clearwater SWCD Idaho Department of Fish and Game Private landowners	Built 25-acre wetland in the Weippe Prairie with the participation of three landowners (Figure 3)	Livestock exclusion from streambanks reduces nutrient, sediment, and bacteria input to the surface water Restored wetland vegetation filters pollutants, reduces erosion, and cools the water temperature
	Clearwater SWCD Private landowners	Improved animal feeding operation facilities for two private landowners with covered manure stacking pads, covered feed bunk mangers, and new corral systems with watering facilities.	Practically eliminated any animal waste from entering surface or groundwater, thereby decreasing nutrient, solids, and bacteria loading to the receiving waters
Grazing	Clearwater SWCD Bennett Creek Grazing Association	Built new livestock corrals and holding pens outside of the riparian area of the Winter Creek drainage	Improved livestock containment prevents riparian degradation
Point Sources	City of Weippe wastewater treatment plant	Removed underdrain from Jim Ford Creek and monitored effluent with a grant from the US Environmental Protection Agency	Phosphorus and bacteria were below the load allocation
Point Sources <i>continued</i>	Timberline High School	Monitoring and effluent disinfection	No bacteria detected in effluent
	Hutchins Lumber, Inc.	Storm water plan implemented	Reduces potential storm water nutrient and sediment load from entering the watershed

The Water Quality Program for Agriculture has accomplished 16 contracts with private landowners since May 2000, with Best Management Practices including the following:

- 10 miles of riparian fencing
- 9 livestock access ramps for heavy-use area protection
- 3 grade stabilization structures
- 2 wildlife and stockwater ponds
- 100 acres of new pasture and hayland plantings
- 1 natural spring development
- 2 feedlot restoration contracts

The Continuous Conservation Reserve Program has enlisted 235.5 acres of marginal pastureland for riparian improvements including the following:

- 16,700 tree and shrub plantings
- 9,300 linear feet of riparian fence
- 1 natural spring development
- 3 ramps built for heavy-use area protection

FUTURE WORK

Work remains to be done in the Jim Ford Creek watershed: the Lower Ford Creek Road on tribal land of the Nez Perce Indian Reservation will be repaired and improved, the hillside within a road cut will be graded to a gentler slope and stabilized with vegetation, and the road will be realigned, graded, and rocked. All of the repair work will eliminate potential sediment transport to Jim Ford Creek.

Work also continues on the Weippe Prairie wetland restoration. Through landowner participation, the Clearwater Soil and Water Conservation District is working on purchasing 100 more acres of potential wetland to restore the area to a functional wetland.



FIGURE 3
25-acre wetland built with participation of three landowners